CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

July 25, 2001

Mr. James R. Leahy
Calpine/Bethel Joint Development
6700 Koll Center Parkway, Suite 200
Pleasanton, California 94566

Dear Mr. Leahy:

RUSSELL CITY ENERGY CENTER (01-AFC-7) STAFF DATA REQUESTS

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission requests the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures, if necessary.

These data requests (#1- 106) address the areas of air quality, biological resources, cultural resources, land use, noise, project description, reliability, socioeconomics, soil and water resources, traffic and transportation, and visual resources. Written responses to the enclosed data requests are due to the Energy Commission staff on or before August 24, 2001, or on such date as may be mutually agreed.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, please send a written notice to both Commissioner William Keese, Presiding Member of the Committee for the Russell City Energy Center proceeding, and to me, within 10 days of receipt of this notice. The notification must contain the reasons for not providing the information, the need for additional time and the grounds for any objections (see Title 20, California Code of Regulations section 1716 (f). If you have any questions regarding the enclosed data requests, please call me at (916) 654-4176.

Sincerely,

Kae C. Lewis
Energy Facility Siting Project Manager

Enclosure

cc: Keith Lichten, SF Bay Regional Water Quality Control Board
Waymen Lee, Bay Area Air Quality Management District
Alex Ameri, City of Hayward

Russell City Energy Center
Data Requests
(01-AFC-7)

Technical Area: **Air Quality**
Author: Gabriel D. Behymer

BACKGROUND

Best Available Control Technology (BACT) Analysis

In AFC Appendix 8.1F "Evaluation of Best Available Control Technology" the applicant proposes a short term average NOx BACT of 2.5 ppm and a CO BACT of 6.0 ppm. However, the USEPA, in a recent letter to the San Luis Obispo County Air Pollution Control District concerning the Morro Bay project (*attached*), has commented that the BACT limit for gas turbines should be set at 2 ppm for NOx (1-hour average corrected to 15% O_2) with no greater then 5 ppm NH_3 slip. In addition, EPA indicated that the BACT for CO should be 2 ppm (3-hour average).

Appendix 8.1F presents a discussion of BACT in the Bay Area Air Quality Management District (District), however the applicant did not address the possibility of using a SCONOx system in the facility. Staff believes a BACT analysis including such a possibility will be needed.

DATA REQUEST

1. Please provide a discussion of how the Russell City Energy Center (RCEC) will address the revised BACT levels recommended by USEPA.
2. Please provide a BACT analysis that includes a discussion of SCONOx technology comparable to the "Top Down Analysis for BACT for NOx" prepared for the Metcalf Energy Center project (dated August 3, 2000).

BACKGROUND

Startup and Shutdown Emissions

The text on page 8.1-23 specifies that "startup *and shutdown* emissions are shown in Table 8.1-18," however, that table only contains information regarding startup emissions. In addition, no vendor data or other evidence has been provided regarding startup and shutdown emissions estimates.

DATA REQUEST

3. Please provide either an updated Table 8.1-18 or an explanation for the discrepancy.
4. Please provide vendor documentation and details of all assumptions used regarding startup and shutdown emissions.

BACKGROUND

Emissions Reduction Credits (ERC)
AFC section 8.1.6.3 “Emissions Offsetting” seems to contain some inconsistencies. Please provide clarification of the following issues.

DATA REQUEST

5. District Rule 2-2-302 indicates an emissions offset ratio of 1.15:1.0 for precursor organic compounds (POC) and the text on page 8.1-46 of the Russell City Application For Certification (AFC) agrees with this offset ratio. However, Table 8.1-35 indicates an offset ratio of 1:1 was used for POC. Please resolve this discrepancy and provide the details of the exact ERC numbers and ERC allocation proposed for offsetting the RCEC.

6. AFC section 8.1.6.3 (pg. 8.1-46) mentions District Rule 2-2-302.1 and indicates that the rule allows NOx ERC to be used to offset increased emissions of POC. This District Rule was deleted on May 17, 2000. Please indicate if the deletion of this rule will impact the proposed ERC allocation, and if so please provide details of all changes.

BACKGROUND

Architectural Treatment

Appendix 8.1B, Table 8.1B-1A lists the onsite structure coordinates for use in the air quality modeling of the emissions impacts from the RCEC. However, the applicant has proposed to include an “architectural treatment” surrounding the stacks & heat recovery steam generator (HRSG) for visual impact mitigation and it is not clear if this structure was taken into account in the modeling.

DATA REQUEST

7. Please provide a detailed analysis of the impacts of the “architectural treatment” on the air quality modeling. If the “architectural treatment” has not been included in the existing air quality modeling and if it is determined to have a significant effect on the modeling, please submit revised modeling results.

8. Please provide a detailed analysis of the impacts of the “architectural treatment” on the modeled fumigation impacts. If the “architectural treatment” has not been included in the existing fumigation modeling and if the “architectural treatment” is determined to have a significant effect on the modeled fumigation impacts, please submit revised modeling results.

BACKGROUND

Duct Burners

AFC Section 8.1.5.1 (pg. 8.1-20) specifies that both HRSGs will be equipped with a 200 MMBtu/hr duct burner, however, no supporting manufacturer or vender documentation concerning design specifications or emissions estimates has been included.

DATA REQUEST

9. Please provide documentation of the manufacturer name, vendor emissions estimates and design specifications for the proposed duct burners.

BACKGROUND

Emergency Natural Gas Generator

AFC Section 8.1.5.1 (pg. 8.1-20) specifies that the RCEC design includes a 600 kW natural gas emergency generator set, however, no supporting manufacturer or vender documentation has been included.

DATA REQUEST

10. Please provide documentation of the manufacturer, vendor emissions estimates and design specifications for the proposed 600 kW natural gas fired emergency generator.

BACKGROUND

Diesel Fire Pump

Table 8.1-16 presents the emission rates from the fire pump engine “per vendor guarantee” however, no manufacturer or vendor information has been provided to substantiate these figures. In addition, the District may have rules, regulations and/or policies that govern diesel engines of this type and yet were not discussed in the AFC.

DATA REQUEST

11. Please provide documentation of the manufacturer, model number and vendor emissions specifications for the proposed 300 bhp diesel fire pump engine.
12. Please provide a discussion of how RCEC will insure that the specified diesel fire pump engine will comply with all District rules, regulations and policies.

Russell City Energy Center
Data Requests
(01-AFC-7)

Technical Area: **Biological Resources**
Author: Stuart Itoga, Rick York

BACKGROUND

In order to analyze the potential significant impacts of the proposed RCEC (Russell City Energy Center) to biological resources in the project area, CEC staff is requesting additional information as listed below.

DATA REQUEST

13. Please provide sensitive plant survey results for Point Reyes bird's-beak (*Cordylanthus maritimus palustris*), Hispid bird's-beak (*Cordylanthus mollis hispidus*), Delta tule pea (*Lathyrus jepsonii*), California seablite (*Suaeda californica*) and any other sensitive plant species known to occur in the project region. If botanical surveys have not been completed, provide an estimated time for completion.

14. Staff experienced difficulty interpreting the map provided in the AFC (Figure 8.2.3). Please provide a map at a scale of 1"/6000' which clearly identifies the biological communities, and their locations, within the RCEC project area. Improvements to the legend and its corresponding symbols are needed.

15. Please provide a discussion of how the proposed project will alter hydrologic inputs, specifically, storm water runoff, to areas surrounding the proposed RCEC project area, including the storm water retention pond, the HARD Marsh and the salt marsh harvest mouse preserve.

BACKGROUND

Radio transmission towers currently occupy the proposed project site; however, much of it is open space. Seasonal wetlands have been identified, and there is a mixture of native and nonnative vegetation on site. The proposed project site is located adjacent to an area of upland habitat. Beyond the uplands are a storm water retention pond and brackish marsh. A variety of wildlife species have been observed in the storm water retention pond and brackish marsh. Additionally, vegetation in these habitats includes pickleweed, a habitat requirement for the endangered (federally and state-listed) salt marsh harvest mouse. Wildlife move between habitats in managing their daily energy budgets and it is likely that some wildlife species are utilizing the upland habitat and proposed project site for activities such as movement, feeding, nesting and as refugias.

DATA REQUEST

16. Please quantify ambient noise levels associated with the RCEC during normal, as well as peak, levels of operation. Provide a discussion of potential

significant impacts to wildlife on the adjacent upland habitat from elevated noise levels associated with construction and operation of the RCEC.

17. Please provide a list of mitigation measures the applicant will employ to avoid or reduce impacts to biological resources caused by construction and operation of the RCEC. Include the compensation ratio that will be used for calculation of mitigation acreage.

18. Please provide updated information on the status of informal consultations with the U.S. Fish and Wildlife Service. Indicate if a letter of concurrence will be issued or a Section 7 consultation will be initiated. If a Section 7 consultation is needed, indicate the agency that will initiate consultation.

19. Please provide updated information on the status of the U.S. Army Corps of Engineers Section 404 permit.

20. Please indicate steps taken to obtain applicable permits from the California Department of Fish and Game (DFG), including a DFG incidental take permit. If an Incidental Take Permit is not required, provide any supporting information.

BACKGROUND

Because of the sensitive biological resources found in the project region, the applicant will need to develop a Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP). The BRMIMP will address all measures the applicant will employ to mitigate impacts to biological resources in the project region during construction and operation of the project. Upon request, Energy Commission staff will provide a current example of a BRMIMP.

DATA REQUEST

21. Please provide an outline of what will be included in the draft BRMIMP for the RCEC. Contents of the BRMIMP should include, but not be limited to: impact avoidance measures (including erosion control measures), compensation strategies, appointment of a Designated Biologist (and associated duties), pre-construction/construction monitoring and any other biological measures to be implemented for any applicable local, state and federal permits.

Russell City Energy Center
Data Requests
(01-AFC-7)

Technical Area: **Cultural Resources**
Author: Roger Mason

BACKGROUND

It cannot be determined from the AFC and Data Adequacy Responses whether local historical societies and local jurisdictions (cities and counties) were contacted to determine if any historical resources in or near the project area are listed in local historical inventories or registers. Such local inventories are often not reflected in information obtained from a records search at the appropriate Archaeological Information Center.

DATA REQUEST

22. Please provide a list of any historical resources listed on local inventories or registers within one half mile of the power plant site and all linear routes that are part of the project. If local historical societies and archaeological societies were not contacted, please contact them and provide copies of any inquiries and responses from such societies. If contact is made through interviews rather than by letter, please provide a written description of contact methods used and information obtained.

23. Please contact The Shoreline Interpretive Center to obtain any information they may be able to provide regarding cultural resources in the vicinity of the project and project linears.

BACKGROUND

In order to document that all cultural resources studies necessary for the CEQA process have been completed, staff needs to have cultural resources technical reports on file.

DATA REQUEST

24. Please provide copies of the cultural resources survey report or reports (technical reports) that document the field surveys conducted by the applicant's consultant for this project. These surveys include those summarized in the AFC and the Supplement to the AFC. These reports should be prepared following the portions of the SHPO's guidelines for "Archaeological Resource Management Reports" that pertain to survey reports. The report should contain a copy of relevant portions of USGS quads at 1:24,000 scale showing the project site and all linear routes and showing what areas were surveyed. Please provide completed DPR 523 forms in an appendix to the report for cultural resources identified as a result of the survey. The report should also have an appendix that contains a copy of the letter and bibliography from the Archaeological Information Center received as part of the records search. Another appendix should provide resumes for cultural resources specialists that contributed to the report.

BACKGROUND

Information regarding permits and easements is necessary for staff to ensure compliance with federal, state and local LORS. At times permits or easements granted under state law include requirements regarding cultural resources. If there are no requirements concerning cultural resources included in an easement or permit, staff will need to know that to ensure compliance with law.

DATA REQUEST

25. Please provide a schedule for acquiring any permits or easements required by state law.

26. Please identify any federal permits required for this project that are defined as a federal undertaking under 36 CFR Part 800, Section 106 of the National Historic Preservation Act.

BACKGROUND

The Supplement to the AFC, submitted June 19, 01, included a discussion of the built environment surrounding the RCEC project site. The discussion compared buildings and structures observed during a drive-by-architectural reconnaissance to buildings and structures on several historic maps. Page 8.3-10 identifies two transmission lines that date prior to the 1920's and prior to 1939.

DATA REQUEST

27. Please discuss features or objects that may have been identified during a drive-by-architectural reconnaissance that would not necessarily appear on an historic map. Examples of possible features are fences or irrigation ditches.

28. Please provide a discussion of the power poles that will be replaced and the transmission lines that will be affected by the project and provide a context statement authored by an architectural historian or a specialist in industrial or architectural history that addresses the history of the feature. Please also record the feature(s) on a DPR 523. (Use of an appropriate specialist is essential to provide the level of information necessary for this analysis).

29. Please have an architectural historian or a specialist in industrial or architectural history provide an evaluation of the transmission line's eligibility to the National Register of Historic Places (NRHP) or the California Register of Historic Resources (CRHR). (Use of an appropriate specialist is essential to provide the level of information necessary for this analysis).

30. Please provide a resume for the person(s) authoring the context statement and evaluating the transmission line for eligibility to the NRHP or the CRHR.

Technical Area: **Land Use**
Author: Jon Davidson

BACKGROUND

In order to assess potential land use impacts, it is necessary to have a clear understanding of existing land uses at the project site and in the surrounding area.

DATA REQUEST

31. Section 1.1 of the AFC states that approximately 11 acres of the 14.7-acre RCEC site is occupied by the transmitter facilities of Radio Station KFAX.
    a. Please describe these facilities.
    b. Describe how the remainder of the site is currently utilized.
32. While Section 8.6.1.2 of the AFC describes existing land uses in the area, the only adjacent uses specifically identified are the Water Pollution Control Facility (north) and a multi-company trucking terminal (west). Please identify the other adjacent land uses (southwest, south, southwest, east, northeast, and northwest).
33. Section 8.6.1.3 of the AFC indicates that the Hayward Area Shoreline Plan as an applicable land use plan. However, in Section 8.6.5 (Applicable Laws, Ordinances, Regulations, and Standards) there is no discussion of the Hayward Area Shoreline Plan.
    a. Describe the Hayward Area Shoreline Plan.
    b. Discuss the consistency of the proposed project with the policies and provisions of the plan.

BACKGROUND

We would like to fully understand all aspects of the proposed project affecting the use of land, including required easements or other agreements affecting private property.

DATA REQUEST

34. The AFC (Section 5.1) indicates that the proposed route for the natural gas supply line follows an existing utility easement across private property (Berkeley Farms). Please describe this easement. Discuss whether the supply line will be located within this existing easement, or whether a new or expanded easement is required.

Russell City Energy Center
Data Requests
(01-AFC-7)

Technical Area: **Noise**
Author: Brewster Birdsall

BACKGROUND

The CEC typically assesses a 5 dB noise level increase threshold of potential significance by comparison of the steady state noise level due to the power plant to the average (or typical) L_{90} values obtained during nighttime hours, as noted by the applicant. The applicant has summarized the average nighttime L_{90} values collected during the monitoring periods in the text and Table 8.7-5 of the AFC. However, the hourly noise level data were not provided.

DATA REQUEST

35. Please provide the hourly L_{eq}, L_{50}, and L_{90} values for noise measurement sites 1 through 5 in tabular format. Note any time periods where it is believed that extraneous noise sources affected the noise level data.

Russell City Energy Center
Data Requests
(01-AFC-7)

Technical Area: Project Description
Authors: Kae Lewis

BACKGROUND

There are three construction laydown location options mentioned on page 2-27 (Project Description) of the AFC. One of these sites appears to be adjacent to the RCEC site and would be expected to have environmental impacts similar to the project site. The other two sites are not adjacent to the project site and may have environmental impacts which are different from those identified to the RCEC.

DATA REQUEST

36. Please identify which option for a construction laydown location will be chosen and provide an environmental and mitigation analysis of any impacts which may be associated with that site (if different from the project site).

Russell City Energy Center
Data Requests
(01-AFC-7)

Technical Area: **Reliability**
Authors: Shahab Khoshmashrab and Steve Baker

BACKGROUND

As designated in the AFC (RCEC 2001a, Table 2-2, Major equipment redundancy), the applicant proposes to install one – 100 percent HRSG feed-water pump per HRSG and maintain one – 100 percent HRSG feed-water pump in the plant warehouse. To fully achieve the applicant's estimate of plant availability and to provide reliability in line with common industry practice, RCEC could install the third HRSG feedwater pump.

DATA REQUEST

37. Please indicate how the RCEC will provide the estimated level of availability and match the level of reliability common in the industry without installing this third pump.

Russell City Energy Center
Data Requests
(01-AFC-7)

Technical Area: **Socioeconomics**
Author: Dan Gorfain/Amanda Stennick

BACKGROUND

In the AFC the Applicant states that there may be some relocation of construction workers that may temporarily affect hotel/motel conditions (page 8.10-8). On order to better assess the potential impact on all sources of available housing, please provide the following:

DATA REQUEST

38. Data on the availability of mobile home and RV park spaces within Alameda County; the number of current vacant spaces; and a map showing the location of mobile home parks and RV sites in Alameda County.

BACKGROUND

In order to better assess the economic impacts and benefits of the project, please provide the following information:

DATA REQUEST

39. Will the applicant pay an annual franchise fee to the City of Hayward? If so, what will this fee be and will it be tied over time to an inflation index such as the Consumer Price Index? Are there any financial agreements between the City and the applicant regarding payment of fees or payment for service, other than property and other normal taxes?

40. Will the applicant reimburse the City for the actual cost of security guards and security services, traffic diversion during construction, and any other emergency services associated with the project?

41. Is the applicant responsible for providing portable toilets during construction?

42. Will the applicant erect and maintain a security fence around the construction site?

Russell City Energy Center
Data Requests
(01-AFC-7)

Technical Area: **Soil and Water Resources**
Authors: Joe Crea, John Scroggs, Jim Henneforth & John Kessler

BACKGROUND

Construction and operation of the Russell City Energy Center (RCEC) may induce water and wind erosion at the power plant site. Stormwater runoff may also contribute to erosion and sedimentation as well as transport of pollutants off-site. The AFC describes existing and proposed stormwater management as follows: Currently, stormwater drains from a small portion of the RCEC Site near the West boundary onto adjacent wetlands, and to a greater extent, drains South for the balance of the site into a Flood Control Channel along the Southern boundary, which flows into marsh and wetland areas at the margin with San Francisco Bay. Once the Advanced Wastewater Treatment Plant (AWT) is constructed, site stormwater will be collected and pumped to the headworks of the City of Hayward's Water Pollution Control Facility (WPCF). Stormwater from the RCEC would be managed in two systems, separating stormwater from Process vs. Non-Process Areas. For Process Areas, stormwater would be collected and passed through an Oil/Water Separator before being contained in a Holding Tank. Stormwater contained in the Holding Tank would then be tested, and if of adequate quality, would be pumped to the headworks of the City of Hayward's WPCF. If stormwater contained in the Holding Tank tested poorly, it would be treated before being pumped to City of Hayward's WPCF. Stormwater originating from Non-Process Areas, such as parking lots and roof-top drains, would be collected in a Stormwater Impoundment Pond, tested for adequate quality, and then released into a Flood Control Channel along the South boundary.

The June 19, 2001 Supplemental Information provides a Drainage Plan and supporting calculations for stormwater management which appears to exclude BMP's identified in the AFC, such as the Holding Tank for retaining stormwater drainage from RCEC Process Areas.

A Stormwater Pollution Prevention Plan (SWPPP) will be necessary, which addresses how drainage into the Holding Tank and Stormwater Impoundment will be monitored for contaminants to determine adequate quality of stormwater before being released. In addition, an Erosion Control and Sedimentation Plan is needed to address construction activities at the AWT and RCEC, and any associated linear or other facilities, such as transmission lines, pipelines, lay-down areas, and staging/storage areas. Also, relatively shallow depths to groundwater may be encountered, and as identified in the Phase I ESA; therefore, the potential for soil and/or groundwater contamination may exist and potentially encountered during construction.

DATA REQUEST

43. Please provide a conceptual Erosion and Sedimentation Control Plan that identifies all measures that will be implemented at various locations of the project during construction and operation of the proposed RCEC Project. The conceptual

Erosion and Sedimentation Control Plan shall identify all permanent and temporary measures in written form and depicted on a construction drawing(s) of appropriate scale. The purpose of the plan is to minimize the area disturbed, to protect disturbed and sensitive areas, to retain sediment on-site and to minimize off-site effects of stormwater runoff. The elements of the plan shall include specific best management measures to be employed to control stormwater runoff during construction and operation at identified locations. In addition, any Best Management Practices (BMP's) necessary to address Nationwide Permits, as required, should be identified. The plan should also identify maintenance and monitoring efforts for all erosion control measures.

44. Include in the Erosion and Sedimentation Control Plan a discussion and description of how this plan will address encountering non-contaminated groundwater during excavations, as well as any contaminated soil or groundwater that may be excavated or encountered during construction. Specifically address how stormwater coming into contact with any contaminated materials will be collected, treated, and discharged.

45. Please provide a draft Storm Water Pollution Prevention Plan (SWPPP) consistent with the requirements for both General Stormwater Construction Activity and General Industrial Stormwater Activity Permits for the RCEC property that includes site modifications necessary to accommodate the power plant.

46. Please clarify if current plans for managing stormwater during plant operations include routing stormwater from Process Areas into a separate Holding Tank, allowing retention and tests for adequate quality, before discharge into the headworks of the Hayward Water Pollution Control Facility (WPCF). If not, please address what BMP's are planned in lieu of stormwater retention and monitoring to assure that no hazardous material pollutants are discharged into the Hayward WPCF.

47. Please explain how storm water management during plant operations from Non-Process Areas will accommodate monitoring of quality before release into the flood control channel along the southern property boundary, if the two storm water basins are only serving to detain, rather than retain storm water. If retention is not part of the current plans, please address what BMP's are planned in lieu of storm water retention and monitoring to assure that no hazardous material pollutants are discharged into the flood control channel, and under more intense rainfall events, could potentially discharge into sensitive wetlands.

48. In reference to the manual "Hydrology and Hydraulics Criteria Summary for Western Alameda County" issued by Alameda County Public Works Agency, please consider if any tidal backwater effects from San Francisco Bay or flood inundation effects in reference to the FEMA 100-year storm should be taken into account in the analysis for designing storm water facilities.

49. In reference to Supplement 1, Sheets 4 and 7 of the Preliminary Storm water Management Basin Sizing Calculations, please explain in the calculation of Time

of Concentration for Pre and Post-Development Runoff, why a value of "P" was used applicable to a 2-Year, 24-Hour Depth rather than a 15-Year Recurrence event.

50. Please provide evidence of consultation with City of Hayward, Alameda County and the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) regarding application of the appropriate design criteria, and plans for implementing appropriate BMP's as specified in a Draft SWPPP.

51. Please include in the Draft SWPPP a component for monitoring stormwater quality, identifying the parameters and frequency of monitoring. In addition, please identify procedures to be followed in the event that stormwater monitored in the stormwater management basins exceeds allowable discharge limits.

BACKGROUND

In reference to the June 19, 2001 Supplemental Information, Figure 8.15(s)-4, FEMA Flood Zones, the 100-year inundation limits are shown to include area within the southwest corner of the site where the AWT is to be located. In addition, Response 9 on Page S-35 indicates that the property is currently protected by berms at the southern end of the property, and that ground level will be increased by 5 feet with fill material before construction in order to protect from 100-year flood events.

DATAREQUEST

52. Please identify the 100-year flood elevation and discuss the elevation of existing and proposed berms and other proposed measures, including specifying the extent of raising critical project facilities, equipment and hazardous material storage/containment areas, in order to accomplish protection from the 100-year flood elevation. Please illustrate these plans on an enhanced plan map and profile, showing proposed facilities and protection measures, and the pre and post-project inundation limits.

53. Please provide evidence of consultation with, and acceptance of plans by City of Hayward, Alameda County and FEMA.

BACKGROUND

In reference to Figure 2.2-4 in the AFC, Water Balance Diagram, several revisions appear necessary to correspond with current project plans.

DATA REQUEST

54. Please remove the Sewage Treatment Plant and redirect this stream to the Hayward WPCF if plans are as described in the AFC, or clarify if this is not the case.

55. Please redirect the Building/Roof Drains (non-process area) stormwater stream to the Stormwater Management Basin, rather than the Hayward WPCF if plans are as described in the AFC, or clarify if this is not the case.

56. Please indicate current plans for stormwater management, including the process for streams that are accepted by City of Hayward as influent to their WPCF.

57. Please indicate supply of Firewater from Hayward's Potable Supply, rather than Reclaimed Water if plans are as described in the AFC, or clarify if this is not the case.

58. Please provide any other updates to the Water Balance Diagram, add a legend indicating that all flow units are in gallons per minute (gpm), and provide a revised diagram when completed.

BACKGROUND

In reference to Section 2.2.12, Fire Protection, the section states that the backup pump will consist of a diesel driven pump. A diesel engine requires storage and containment of diesel fuel, and may not be as reliable as utilizing the primary electric pumps with a standby generator supplied with natural gas or propane, and automatic transfer switch.

59. Please evaluate design of the backup fire pump system considering use of a standby generator and automatic transfer switch. The generator could be fueled with either natural gas or propane.

BACKGROUND

Data is either missing or duplicated in two areas of AFC Section 8.15. In reference to Page 8.15-10, Table 8.15-3 and Page 8.15.16, Table 8.15-3, both tables have the same data. The table on Page 8.15-10 should be representative of water quality data for storm water runoff. On Page 8.15-14, Section 8.15.2.2 – Water Supply Impacts, the fifth paragraph refers to water quality constituents of the Hayward Water Supply being listed in Table 8.15-3. However, Table 8.15-3 characterizes quality of cooling tower blowdown.

DATA REQUEST

60. Please provide the appropriate data for the table on Page 8.15-10 (AFC) to represent water quality of storm water runoff.

61. Please provide the appropriate data characterizing the City of Hayward Water Supply as referred to on Page 8.15-14 of the AFC.

BACKGROUND

In reference to Supplemental Information Figure 8.15(s)-3a and AFC Figure 2.3-2, Water Supply Pipeline Routes, water required for domestic and fire fighting uses will be provided by the City of Hayward. A new connection will be made to the existing 12-inch potable water line that is located on Enterprise Avenue.

DATA REQUEST

62. Please show locations of the needed backflow devices on the piping plans and specify preliminary makes and models of devices that would be acceptable.

BACKGROUND

The proposed Advanced Wastewater Treatment of secondary effluent includes plans to use microfiltration and reverse osmosis processes. Microfiltration is typically used to treat relatively low turbidity and low suspended solid water supplies to meet drinking water standards. In addition, a continuous sodium hypochlorite (chlorine) feed system is proposed ahead of the microfiltration system for bio-fouling control. The leading manufacturer of microfiltration equipment uses hollow fiber membranes manufactured from polypropylene material, which is subject to degradation when exposed to oxidants such as chlorine.

In reference to Page 2-34 of the AFC, it is suggested that two standby Continuous Microfiltration (CMF) units are included in the AWT design to provide redundancy in the event of malfunction and during routine cleanings. Under peak water supply conditions, a demand flow rate of 3,660 gpm is projected. According to Table 2.3 -1, a total of nine units comprised of 90 modules/unit are proposed with a total 24-hour peak capacity of: [(4.43 gpm/module) (90 modules/CMF unit) (9 CMF units) = 3,588 gpm]. This calculation suggests that with all 9 CMF's in operation, 24-hours per day that the microfiltration design capacity is not adequate to meet peak water supply conditions, nor supply any redundancy during malfunction or cleaning.

DATA REQUEST

63. Please provide written confirmation from a microfiltration process manufacturer, who has regularly furnished and installed units of comparable size, that the microfiltration process as proposed is an appropriate technology for treatment of secondary effluent compatible with water quality characteristics of supply from the Hayward WPCF and the USD/EBDA.

64. Please provide an explanation on how the proposed microfiltration membrane will not be damaged by exposure to chlorine.

65. Please evaluate the proposed peak day water demands with respect to capacity of filtration provided by nine CMF's. Evaluate the need to provide additional CMF units to provide adequate redundancy.

BACKGROUND

In reference to Supplemental Information Table 7(s)-7 on Page S-33, the data is intended to show AWT waste stream quality using USD/EBDA secondary effluent. However, the data is labeled in reference to Hayward WPCF effluent.

DATA REQUEST

66. Please confirm the data in Table 7(s)-7 applies to USD/EDBA secondary effluent, or if not, provide a table with applicable data.

BACKGROUND

Secondary effluent conveyed by the USD/EDBA Force Main is proposed as a backup source of water for RCEC in the event that there is an upset at the Hayward WPCF which causes deterioration of water quality.

DATA REQUEST

67. Please describe how the Hayward WPCF effluent will be monitored and measured for adequacy of water quality for the proposed RCEC use.

68. Generally describe the hydraulic controls, including valves, pumps and operating logic that will be used to transfer from primary to backup water supply. Will transfer be automatically actuated or controlled based on water quality results and set points, or will transfer be manually controlled?

BACKGROUND

In reference to AFC Section 7 (Pages 7-1, 7-2 and 7-8), each waste stream "will be monitored prior to discharge to the existing sewer to assure that it meets appropriate discharge limits". Reject streams from the AWT, cooling tower blowdown and plant drainage are proposed with separate monitoring points to assure they meet discharge limits.

DATA REQUEST

69. Please identify the waste stream constituents to be monitored (e.g. copper, BOD, TSS?). Is monitoring proposed by continuous sampling or with grab samples?

70. Please describe the control system (or procedure) that would be initiated if a waste stream does not meet discharge limits.

71. If a waste stream does not meet limits, is an alarm automatically activated? Does a plant shutdown occur? Are wastes discharged to a holding facility under these conditions?

BACKGROUND

In reference to AFC Section 8.14 – Waste Management, a Phase I ESA was conducted for the RCEC site, and revealed recognized environmental conditions in contamination to soil and groundwater. The contamination appears to have occurred during historical uses of the property by a metal finishing company as a result of its processes and use of underground storage tanks. Although the metal finishing company, Runnels Industries, is still currently in operation, it appears that development of the RCEC will utilize the land currently occupied by Runnels Industries, which is located on the east end of the proposed RCEC site near Whitesell Drive. Results of soil sampling conducted by Runnels Industries in 1996 indicate the presence of chromium, lead and zinc in soil and up to four feet of potentially contaminated fill from dumping of sand blasting waste. Results of groundwater monitoring revealed groundwater contamination from VOCs and petroleum hydrocarbon, with the highest concentrations existing near the center of the Runnels parcel, and lower concentrations detected along the east property boundary and down-gradient near the west property boundary. Site closure for the materially recognized conditions has not been obtained by Runnels Industries.

DATA REQUEST

72. Please provide an analysis of the potential for the construction or operation of the RCEC to impact existing soil or groundwater contamination, and the identification, containment and treatment measures that would be employed in order to mitigate the contamination as may be required prior to, during and following construction of the RCEC. The analysis should include the following:

    a) Documentation of consultation with Alameda County Health Care Services Agency – Environmental Protection Division and Hayward Fire Department regarding the planned disturbance to soils associated with the RCEC development and the recommendations or requirements of these agencies for any additional soil and groundwater sampling, pre-construction treatment/remediation, testing during excavation activities, handling/treatment and disposal techniques if contaminated soil or groundwater is encountered, and post-construction monitoring. If possible, please identify the activities and schedule necessary to obtain site closure of the recognized environmental conditions.

    b) Clarification if the Applicant is assuming the environmental liability for any ongoing remediation and monitoring for contamination to soil and groundwater that may be required following acquisition of the Runnels Industries and KFAX parcels.

c) Submittal of Draft Sediment Control and Stormwater Pollution Prevention Plans which incorporate measures identified in consultation with Alameda County and Hayward Fire Department to prevent the spread of soil and groundwater contamination, and prevent degradation of surface water quality.

Technical Area: **Traffic & Transportation**
Author: Fred Choa

BACKGROUND

The AFC presents Table 8.12-2 “Intersections with Planned Improvements”, in which the source was identified as the “City of Hayward Circulation Element, 1998”.

DATA REQUEST

73. Please provide from the City of Hayward Circulation Element the planned improvements at the 12 study intersections included in the AFC.

74. Please clarify the meaning on “n/a” as they relate to the intersections of Clawiter Road / Eastbound SR 92 Ramp and Clawiter Road / Westbound SR 92 Ramp. As stated on Page 8.12-2, the intersections are being signalized. Therefore, please provide the resulting intersection level of service.

BACKGROUND

The AFC (AFC page 8.12-14) assumes a 10% car-pool rate for construction employee trips, but does not provide a source for this assumption.

DATA REQUEST

75. Please provide observed data regarding construction employee car-pool rates for at least three comparable projects, or use car-pool rates that reflect Alameda County car-pool share of drivers.

76. Please describe measures to enforce construction employee car-pool activity.

BACKGROUND

The AFC (AFC page 8.12-14) assumes that 16% of construction traffic arrives during the peak period.

DATA REQUEST

77. Please provide observed data regarding construction employee arrival and departure patterns for at least three comparable projects, preferably in the seven-county San Francisco Bay Area.

BACKGROUND

In order to identify whether or not the AFC (AFC page 8.12-2 , Table 8.12-2) results in a significant impact to any of the study intersections, City of Hayward thresholds for acceptable level of service conditions are required.

DATA REQUEST

78. Please provide City of Hayward level of service thresholds and significance criteria.

BACKGROUND

On AFC page 8.12-18 it states “Though actual counts were not available for one of the new intersections, State Route 92 at Clawiter, this intersection is at LOS “F”, and the project would not make it significantly worse.”

DATA REQUEST

79. Please provide technical data supporting this conclusion, including number of construction phase trips and operation phase trips.

BACKGROUND

Table 8.12-9 presents “Construction and operation phase LOS for selected roadway intersections”.

DATA REQUEST

80. Please provide reasoning why only certain intersections and peak hours are presented in the AFC.

BACKGROUND

Appendix 8.12-A only provides Existing AM and PM peak hour intersection level of service calculations.

DATA REQUEST

81. Please provide detailed level of service calculation for all study intersections included in the AFC, including Existing, Construction Phase and Operation Phase AM and PM peak hour conditions.

BACKGROUND

Table 8.12-7 presents “Construction Phase trip generation, daily traffic and peak hour”.

DATA REQUEST

82. Please provide an operation phase trip generation, daily traffic and peak hour .

BACKGROUND

To assess the potential for impact associated with accidental hazardous materials releases during transportation to the facility, it necessary to know the specific preferred transportation route(s) and the land uses along that route(s). The transport of hazardous materials to the facility during operations is addressed in the section on Traffic and Transportation. Information on the number of hazardous material deliveries is provided, as are several different routes from a major highway to the facility.

DATA REQUEST

83. Please provide a more detailed map indicating the preferred hazardous materials transportation route from either Interstate 880 or State Route 92 to the facility entrance gate and include a brief description of the land uses along the route(s) (commercial, industrial, residential, parks, schools, open space, etc.).

Russell City Energy Center
Data Requests
(01-AFC-7)

Technical Area: **Visual Resources**
Author: Eric Knight and William Walters

BACKGROUND

Staff will need to include in the Staff Assessment the Applicant's figures presented in Chapter 1.0 Executive Summary, Chapter 2.0 Project Description, Section 8.13 Visual Resources, and those provided in response to these data requests.

DATA REQUEST

84. Please provide electronic files of Figure 1-1 from Chapter 1.0 Executive Summary, and the following Chapter 2.0 Project Description figures: 2.2-1, 2.3-1, 2.2-2a, and 2.2-2b.

85. Please provide electronic files of all figures presented in Section 8.13 Visual Resources and in response to these data requests.

BACKGROUND

Seven key observation points (KOPs) were established in order to evaluate both the visual setting and the potential for project-induced visual impacts. Photographs were obtained at each KOP and presented along with visual simulations of the proposed project. Section 8.13.2.1 Analysis Procedure (page 8.13-10) states that photo simulations were prepared "providing the viewer with a clear image of the location, scale, and visual appearance of the proposed project." However, based on a field reconnaissance, all of the images (existing view photographs as well as simulations) are presented at substantially less than life-size scale. Most images are approximately 50% (or less) of life-size scale when held at a standard reading/viewing distance of 18 inches. The presentation of images at such a reduced scale does not accurately represent the views that would be experienced at the various KOPs because the images substantially understate the prominence of visible landscape features as well as potential visual impacts.

DATA REQUEST

86. Please re-scale all existing view[1] and simulation images to achieve life-size scale. If re-scaling results in substantial degradation of the image, please provide new setting and simulation images at life-size scale. After obtaining appropriately scaled images, please provide high quality 11"x17" color photocopies of the existing views and simulations.

BACKGROUND

As discussed under Assessment of Visual Effects (Section 8.13.2.4) and seen in Figure 8.13-4b, the project would substantially block the view of Mount Diablo from the

[1] It is not necessary to re-scale the visual character photographs (Figures 8.13-2a and 8.13-2b).

Hayward Shoreline Interpretive Center (KOP 2). This is a potentially significant adverse visual impact under the criterion set forth in Appendix G of the CEQA Guidelines that reads: "Would the project have a substantial adverse effect on a scenic vista?" The AFC does not identify the impact as significant, and consequently, no mitigation is proposed. However, the Applicant states that they "will donate funds to the Hayward Area Recreation and Park District (HARD) for providing benches and other amenities on its trail system." The AFC continues: "If the District desires, some of these funds can be used to provide enhancements on portions of the trail to the northwest of the Interpretive Center where views toward Mt. Diablo will not be affected by the RCEC."

DATA REQUEST

87. Please indicate whether the Applicant has had any communications with HARD about the project's potential to block views of Mt. Diablo from the Interpretive Center.

88. If the Applicant has communicated with HARD, please discuss whether HARD personnel indicated they would accept the funds and whether they considered "benches and other amenities on its trail system" adequate to compensate for the lost view of Mt. Diablo from the Interpretive Center. Please provide complete contact information for any HARD representatives the Applicant has communicated with.

89. Please provide detailed information on the types and locations of amenities that the Applicant believes would be appropriate to include as enhancements along the trail system.

BACKGROUND

The intent of the architectural treatment for the power plant is "to simplify the complexity of the plant's equipment and create a unified visual element that has a sculptural quality" (page 8.13-13). However, the screening structure would be massive, blocking some views of the surrounding hillsides, and from the Hayward Shoreline Interpretive Center, the view of Mt. Diablo. While simplifying the complexity of the power plant's equipment is appropriate, it seems that this could be accomplished with a screening structure or structures that would not block as much of the view of the surrounding hillsides and Mt. Diablo. In particular, it may be possible to open up the view in the area between and around the HRSGs and stacks. Some elements of the power plant behind the proposed screening structure may not require the full height and mass of the screening structure to be effectively screened.

Another intent of the architectural treatment is to make the project a "landmark visual element" at the City of Hayward's western entry. In a letter to the Applicant (AFC Appendix 1C), the City stated that "some kind of architectural treatment is both desirable and appropriate for Russell City Energy Center and that Calpine/Bechtel is moving in the right direction with your plans for architectural treatment." The letter

continues: "The City will continue to work with Calpine/Bechtel to develop the best possible architectural design for all concerned."

DATA REQUEST

90. Please provide simulations of the project (as seen from KOPs 1 – 4) with an architectural treatment that would serve as a landmark visual element and simplify the complexity of the power plant, but would also preserve as much of the Interpretive Center's view of Mt. Diablo as possible. Please provide 11" x 17" high-resolution color photocopies of the visual simulations at life-size scale.

BACKGROUND

Table 8.13-2 (RCEC Equipment Dimensions) lists the height of the product water storage tanks at the proposed Advanced Wastewater Treatment Plant (AWT) as 36 feet. However, Figure 2.3-1, a site plan for the AWT, lists the height of these tanks as 42 feet.

DATA REQUEST

91. Please clarify the height of the product water storage tanks.

92. If the correct height is 42 feet, please indicate if these tanks would be visible above the landscaping depicted in the simulation of the project from KOP1 (Figure 8.13-3b). If the tanks would be visible, please revise the simulation accordingly.

BACKGROUND

Section 8.13.2.3 (page 8.13-14) and Section 8.13.4.1 (page 8.13-21) generally describe the landscaping the Applicant proposes to reduce the visual impacts of the project. Along street frontages, trees will be planted to comply with the requirements of the City of Hayward zoning ordinance. On other sides of the site, tall, fast-growing broadleaf trees will be planted to provide maximum screening of views toward the site. Staff will need to review a conceptual landscape plan in order to conduct the visual analysis of the proposed project and determine the project's compliance with LORS.

DATA REQUEST

93. Please provide a conceptual landscape plan with locations of trees, shrubs, and other plants to be used and time to maturity for each species.

BACKGROUND

Proposed perimeter landscaping is depicted in simulations of the project ten years after installation. To accurately evaluate potential visual impacts and the effectiveness of this mitigation measure, Staff will need simulations that depict the proposed landscaping, as it would appear at installation and at maturity.

DATA REQUEST

94. Please provide simulations of the project as seen from KOPs 1 - 4 that depict proposed landscaping as it would appear at installation and at maturity. Please provide 11” x 17” high-resolution color photocopies of the visual simulations at life-size scale.

BACKGROUND

Section 8.13.2.3 (page 8.13-13) states that three areas may be used for laydown of equipment and parking for construction workers. These areas are generally described as a 10-acre site located north of the project on Depot Road; a four-acre site on the east side of Whitesell Street and South of Enterprise Avenue; and vacant land around PG&E's Eastshore Substation. Staff needs a map showing the exact location of the proposed laydown areas in order to assess the visual impacts from use of the laydown areas.

DATA REQUEST

95. Please provide a map at a specified reasonable scale that shows the location of the three proposed laydown areas.

BACKGROUND

The AFC (page 8.13-13) states that since the proposed gas pipeline would be buried and the surface conditions restored, the pipeline would not be a source of long-term changes to the visual environment. Staff needs clarification on whether there would be any aboveground features such as a gas metering station at the tie-in point or at other locations along the proposed gas pipeline.

DATA REQUEST

96. Please specify whether the proposed gas line would include any aboveground eatures. If it would, please provide a description of the location, setting, visibility, appearance, visual impacts, and any aesthetic treatment for any and all aboveground features associated with the proposed gas pipeline.

BACKGROUND

In the AFC (Section 8.13.2.3, page 8.13-4), the Applicant has proposed a plume-abated cooling tower design. However, the Applicant has not provided any technical specifications or plume modeling information to support their conclusion that the "cooling tower will be designed to prevent the formation of visible plumes under all but the most extreme meteorological conditions." In order to confirm the Applicant’s assessment and complete the visual analysis, staff requires additional information regarding the plume mitigation design features of the cooling tower.

DATA REQUEST

97. Please provide the design basis for the plume-abated cooling tower indicating the ambient condition (temperature and relative humidity) limits at which plumes may form and the associated exhaust conditions of the cooling tower.

98. For staff to conduct Combustion Stack Visibility Program (CSVP) modeling of the plume-abated cooling tower exhaust, please provide at a minimum cooling tower operating data to fill the following table. The values must correspond to maximum heat rejection operating conditions at the specified ambient conditions.

Ambient Condition	Exhaust Velocity (m/s)	Exhaust Flow Rate (lbs/hr/cell)	Moisture Content (% by weight)	Exhaust Temperature (°F)
30°F, 80% RH				
30°F, 60% RH				
30°F, 40% RH				
40°F, 80% RH				
40°F, 60% RH				
40°F, 40% RH				
50°F, 80% RH				
50°F, 60% RH				
50°F, 40% RH				

Please note that staff intends to model the plume-abated cooling tower using hourly estimated exhaust conditions based on the hourly ambient conditions of the meteorological file used to perform the modeling. The cooling tower exhaust conditions will be interpolated based on the exhaust values given. Therefore, additional combinations of temperature and relative humidity, if provided by the applicant, will be used to more accurately represent the cooling tower exhaust conditions.

99. Please indicate if the Applicant is willing to stipulate to a Condition of Certification that specifies the level of plume mitigation as described above. If so, please provide an example of what the Applicant would consider an acceptable cooling tower plume mitigation Condition of Certification.

100. Please provide a plume frequency and size modeling assessment of the proposed cooling tower and provide electronic copies of the modeling input and output files and the meteorological files.

101. Please indicate whether there are any other sources of water vapor plumes within the project viewshed. If there are other sources of plumes, please show the locations of these facilities on a map at a specified reasonable scale.

BACKGROUND

The visible water vapor plume discussion in the AFC (pages 8.13-4 and 8.13-18) does not provide detailed information regarding the frequency and size characteristics of the HRSG exhaust stack water vapor plumes. The AFC states: "With the design being used for the HRSGs, water vapor plumes will not be seen emanating from the plant's HRSG stacks, under nearly any circumstances. However, on a few occasions during the year when temperatures are extremely low and humidity is extremely high, very wispy-plumes coming from the stacks may be visible." In order to confirm the Applicant's assessment and complete the visual analysis, staff requires additional information regarding the plume mitigation design features of the HRSGs.

DATA REQUEST

102. Please provide the design basis for the plume-abated HRSG exhaust indicating the ambient condition (temperature and relative humidity) limits at which plumes may form and the associated exhaust conditions.

103. For staff to conduct CSVP modeling of the plume-abated HRSG exhaust, please provide at a minimum HRSG exhaust parameter data to fill the following table. The values must correspond to maximum heat rejection operating conditions at the specified ambient conditions.

Ambient Condition	Moisture Content (% by weight)	Exhaust Flow Rate (lbs/hr)	Exhaust Temperature (°F)
load with Duct Firing and Power Augmentation			
30°F, 80% RH			
30°F, 60% RH			
30°F, 40% RH			
40°F, 80% RH			
40°F, 60% RH			
40°F, 40% RH			
50°F, 80% RH			
50°F, 60% RH			
50°F, 40% RH			
load with Power Augmentation no Duct Firing			
30°F, 80% RH			
30°F, 60% RH			
30°F, 40% RH			
40°F, 80% RH			
40°F, 60% RH			
40°F, 40% RH			

50°F, 80% RH			
50°F, 60% RH			
50°F, 40% RH			
load no Duct Firing and no Power Augmentation			
30°F, 80% RH			
30°F, 60% RH			
30°F, 40% RH			
40°F, 80% RH			
40°F, 60% RH			
40°F, 40% RH			
50°F, 80% RH			
50°F, 60% RH			
50°F, 40% RH			

Please note that staff intends to model the HRSG exhausts using hourly estimated exhaust conditions based on the hourly ambient conditions of the meteorological file used to perform the modeling. Therefore, additional combinations of temperature and relative humidity, if provided by the Applicant, will be used to more accurately represent the HRSG exhaust conditions.

104. Please indicate if the Applicant is willing to stipulate to a Condition of Certification that specifies the level of HRSG plume mitigation as described above. If so, please provide an example of what the Applicant would consider to be an acceptable HRSG plume mitigation Condition of Certification.

105. Please provide a plume frequency and size modeling assessment of the proposed HRSGs and provide electronic copies of the modeling input and output files and the meteorological files.

BACKGROUND

The Hayward Air Terminal is located about 1.5 miles north of the project site. The discussion on night lighting (page 8.13-14) does not indicate if the HRSG stacks and architectural screening structure will require aviation safety lighting.

DATA REQUEST

106. Please specify whether the HRSG stacks and architectural screening structure will require illumination to meet Federal Aviation Administration (FAA) or other federal, state, or local aviation safety requirements. If so, please provide a description of lighting, including the locations and heights where lights will be installed.